PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

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NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing
(day/month/year)   13.08.2003
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Applicant's or agent's file reference NM5175	**IMPORTANT NOTIFICATION**

International application No. PCT/EP01/15347	International filing date (day/month/year) 27.12.2001	Priority date (day/month/year) 27.12.2001

Applicant
NOKIA CORPORATION et al

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. **REMINDER**

   The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

   Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

   For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

   The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.
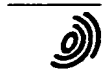
Name and mailing address of the international preliminary examining authority:	Authorized Officer
European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Koski, P Tel. +49 89 2399-2709

Form PCT/PEA/416 (July 1992)

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

REC'D 15 AUG 2003

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Applicant's or agent's file reference NM5175	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)

International application No. PCT/EP01/15347	International filing date *(day/month/year)* 27.12.2001	Priority date *(day/month/year)* 27.12.2001

International Patent Classification (IPC) or both national classification and IPC
G06F13/28

Applicant
NOKIA CORPORATION et al

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1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

    ☐   This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

    These annexes consist of a total of   sheets.

3. This report contains indications relating to the following items:

    I   ☒   Basis of the opinion

    II   ☐   Priority

    III   ☐   Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

    IV   ☐   Lack of unity of invention

    V   ☒   Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

    VI   ☐   Certain documents cited

    VII   ☐   Certain defects in the international application

    VIII ☐   Certain observations on the international application

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Date of submission of the demand 24.07.2003	Date of completion of this report 13.08.2003

Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Juenger, B Telephone No. +49 89 2399-7485

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)):*

Description, Pages

1-7   as originally filed

Claims, Numbers

1-14   as originally filed

Drawings, Sheets

1-2   as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

☐   the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

☐   the language of publication of the international application (under Rule 48.3(b)).

☐   the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐   contained in the international application in written form.

☐   filed together with the international application in computer readable form.

☐   furnished subsequently to this Authority in written form.

☐   furnished subsequently to this Authority in computer readable form.

☐   The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐   The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

☐   the description,   pages:

☐   the claims,   Nos.:

☐   the drawings,   sheets:

5. ☐   This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-14
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-14
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-14
	No:	Claims	

2. Citations and explanations

   see separate sheet

Re Item V
Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1   The invention relates to data transfer between a processor memory and other circuitry connected to the processor like e.g. a DSP. Data blocks to be transferred from the DSP to the memory of the processor are collected in a list of multiple blocks in the DSP local memory and when the list reaches a predetermined limit, the blocks are then transferred by DMA into the memory of the processor. Finally, an interrupt is sent to the processor to inform about the data tranferred. This is disclosed in the nearest prior art discussed on page 3. Thus, a number of interrupts are bundled by transferring via DMA a number of blocks instead of having n DMA transfers with n interrupts.

2   The invention is characterized by the way the data blocks are tranferred and by the way the processor is informed about the DMA transfers. In essence, each data block is transferred by DMA and the information about the DMA transfer is added to a transaction log. The transaction log is provided to the processor by interrupt when it has reached a certain size. Thus, still the advantage of having one interrupt only is preserved while instead of one big DMA transfer of one list, the blocks may be DMA tranferred individually.

3   This solves the problem of making the data transfer more flexible and also allows to provide additional information in the transaction log.

4   The prior art documents do neither suggest nor render obvious such data transfer using a transaction log as proposed in the solution of the present application.

5   It is noted that the independent claims should have been brought into the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would have been appropriate, with those features known in combination from the prior art (document EP0908830 mentioned in the description) being placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT). In the present case, the features of setting up a DMA and triggering a DMA for performing data transfer between a memory of a processor and a circuitry connected to the processor are known from this document.